

# SPARK GAP MARC

July 1998

## *"To Tune or Not to Tune?"*

In the field of amateur radio there are many myths and legends about communication and how it should be accomplished.

Scotty Mullikin (W9DMO) is prepared to debunk some of the longstanding myths about the value of antenna tuning at the MARC club meeting on Saturday, July 18<sup>th</sup>.

Scotty has been an amateur radio operator since 1934. His plunge into amateur radio was sparked by his interest in communications. Morse code became almost second nature because of his association with the father of one of his friends. The father was a telegrapher with Western Union. After getting his license, he has actively enjoyed the hobby for all these years, with the exception of the break that was required during WWII.

In earlier times, Scotty was also quite passionate about radio controlled airplanes. He had an extensive collection of planes, engines, tools and parts that he has given up due to vision problems and his retirement.

He is a builder and tinkerer, who takes exceptional enjoyment in the design of antennae. In his earlier employment with Collins Radio he was one of the lucky employees who worked in

their antenna division. Due to the high number of employees seeking this department, the company held a lottery each year to fill three rotating positions. The permanent employees in the department were some of the finest antenna design engineers in the world. A considerable amount of the design work was done for the U.S. Military.

Scotty has designed and sold many antennae at local hamfests. He loves to educate other on the areas of his expertise.

He explains that, "Most hams aren't aware that the newer gear protects us from our ignorance." It does so by dropping the output power when it senses a higher SWR. At a ratio of 2 to 1, power can be cut by 50% and as the ratio goes higher the output power will drop to approximately 20 Watts.

Since antenna design is an art as well as science, and Scotty is an artist in the field, he will offer suggestions in how to best match a transmitter to an antenna.

Join us Saturday morning for the meeting at 8:00 AM. Most attendees meet for breakfast at 7:00 AM. Find the current breakfast spot by monitoring the club repeater at 146.835.

**Club Meeting**  
8 AM on Saturday, July 18

# The Mid-State Amateur Radio Club

## Membership

The Mid-State Amateur Radio Club is based in Franklin, Indiana. Membership is open to all amateur radio operators and other interested persons.

Club meetings are conducted on the third Saturday of each month in the training room of the Johnson County Emergency Operations Center at 1100 Hospital Road in Franklin, IN.

Membership dues are \$18.00 per year for full members. Other types of membership are available.

Amateur Radio Operator License testing is offered following the club meeting during the months of March through November.

The club maintains an open repeater on the 2-meter band at 146.835 MHz. Each full member has access to the repeater and autopatch.

Membership dues payment and change of address should be mailed to the club treasurer at the address listed below.

## Newsletter

The Spark Gap is the monthly club newsletter. Articles and information that would be of interest to the club members are welcome. Information may be submitted by E-mail (ASCII text) or by mailing to the club address listed below.

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## MARC Club Officers

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Dave Julian (WB9YIG)  
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### **VE Team Coordinator**

Dave Wendt (KA9OOH)  
(317) 974-1488

### **Activities Director**

Vacant  
Volunteer Needed!



## MARC, PO Box 836, Franklin, IN 46131

A SPECIAL SERVICE CLUB OF THE ARRL



# Field Day '98 One of the Best Yet!

*"CQ Field Day, CQ Field Day...This is KB9NDF, 3-Alfa, Indiana."*

And so it went, continuously for 24-hours. Field Day '98 by most accounts was one of the best yet. Operating 3A, the Mid-State ARC operation made 145 CW contacts and 284 phone contacts. That accounts for 1048 points. Live Sunday morning coverage on WISH TV gave us another 100 points, plus a lot of exposure to the general public. According to Field Day coordinator J R Osborne



Lee Porter

(KB9HSE), he can't go anywhere without being recognized...Both J R and Lee Porter (KB9KDK) were featured in a news story during the WISH TV Sunday evening news. Cory Vergara (KB9OXU) and his dad Joe Vergara (KA9ZPA) were also interviewed live during one of the Day Break segments on Sunday morning. Everyone did a great job.



Mike Clark installing tri-bander on the crane

According to log sheets Larry Card (W9CC) made the most CW contacts while Mike Clarkson (KB9NZF) hauled in the most phone contacts. Ed's 28 ton crane put the 6-element beams in the best spot to make those DX contacts. Without a rotor control the beams were left in an east-west direction.

Contacts as far as Hawaii and all along the West Coast were made from the front of the beams. The eastern seaboard came in strong on the backside of the beams. Two vertical HF antennas and a 40-meter dipole complemented the antenna farm.

Contest results were easy to figure thanks to the efforts of Jack Parker (W8ISH) and Hershel Saylor (WD9GMM).

Contacts were checked for duplication using a 386 computer and logging program. Jack and Hershel kept a close vigil on the contest results during the marathon session. Total contacts and scores were known before the first radio was packed away. Some thought is being given to logging all contacts next year using a computer network.

Of course, Field Day would not be complete without lots of great food. A cadre of YL's organized this year's menu complete with Pat's famous Texas 'Floor Mat Chili'. Marilyn Parton (N9TUK), Kathy Reneau



Brandy

(KB9QPB), Ellen Weimer (KB9NZC) and Becky Turner (KB9QFU) handled the chips, dips, pop and pitch-in dinner. Nobody went away hungry.

Over two dozen radio amateurs participated in the Field Day operation at Prince's Lakes town hall. According to J R, our Sunday morning TV coverage was well received. Several people visited the Field Day site or called asking about becoming involved in amateur radio. As we look toward Field Day '99, several sites are being considered. If you have a place in mind contact J R or one of the club officers.~W8ISH

## Field Day Equipment

Drake TR4(100 W)

Drake T4X

Drake R4A

Kenwood 140S (100 W)

Yaseau 100MP (100 W)

Ten Tec Scouts (2)

Yaseau 757

Yaseau Dual Band

6 Element Tri-band Beams (10-15-20 Meters)

Verticals (2) (10 to 80 Meters)

A99 Stick (2) (10 to 20 Meters)

5KW generator

28 ton Crane for tri-bander

EOC mobile tower & R7

Talk-in 2 meter rig with mag mount antenna on door frame (commercial power)

Computer for Packet and contact logging (commercial power)

# The ARRL Letter

## Amateur Radio Spectrum Protection Act

ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, reports that HR 3572, the Amateur Radio Spectrum Protection Act, now has 39 cosponsors (including the original sponsor) and several more members of Congress have indicated their intention of signing on. "Letters from ARRL members are beginning to take effect," Mansfield says.

The bill, introduced March 27 at the request of the ARRL, would protect the existing Amateur Radio spectrum against reallocations to or sharing with other services unless the FCC provides "equivalent replacement spectrum" elsewhere. The bill was introduced by Rep Michael Bilirakis of Florida, a Republican, with the cosponsorship of Rep Ron Klink of Pennsylvania, a Democrat.

Dan Burton of Indiana is one of the 39 cosponsors.

The bill points out Amateur Radio's basic purpose as a "voluntary, noncommercial radio service" that has "consistently and reliably" provided emergency communication during and after disasters. The measure notes that the FCC has "taken actions which have resulted in the loss of at least 107 MHz of spectrum to radio amateurs."

HR 3572 has been referred to the House Commerce Committee. An effort is under way to enlist additional cosponsors for the measure. Amateurs are encouraged to contact their Representatives and urge them to support the bill or to sign on as cosponsors. Text of the bill is available at <http://thomas.loc.gov/cgi-in/query/z?c105:H.R.3572>:

Mansfield is continuing to seek additional cosponsors for HR 3572 and **urges individual hams and clubs to contact their representatives in Congress and encourage them to sign on.**

## Question Pool Changes for General Exam

A new General class examination question pool becomes effective July 1. The new General exam will include five additional questions on the topic of RF safety. Applicants

NOTE: as of January 1, 1998, only FCC Forms 610 dated September 1997 or later are acceptable to the FCC or to VE teams.--*Bart Jahnke, W9JJ, ARRL/VEC*

— Edited and reprinted from *The ARRL Letter*, published by the ARRL —

### YOU KNOW YOU MIGHT BE A "HAM" WHEN.....

- ....You burn your lips on a microphone because the antenna wasn't grounded.
- ....Your spouse wants to know why you are putting the clothes line up so high.
- ....When you go to the repeater site to repair it, after a hard day at the office, then you stay a good part of the night!
- ....You grab your HT instead of a newspaper when you are on your way to the bathroom.
- ....You say, "QRZ" when you answer the telephone. .
- ....Your battery goes dead because you forgot to start the car before the long QSO.
- ....Instead of running to the basement during a tornado warning, you run to your vehicle to participate in SKYWARN.
- ....Your spare bedroom has more products than Radio Shack.
- ....Your electric bill exceeds your house payment.
- ....You buy a home because it is high in location and has all kinds of land for antennas.
- ....There's a blackout and the Power Company calls YOU to complain.
- ....You check into the local Two Meter net from your lawn tractor or ATV.
- ....You have more wire run than the Power Company does.
- ....You have to move the desk microphone out the way each night to eat dinner.
- ....You start talking to your spouse/kids in Morse code.
- ....You come home from work and find your rig in the dog house and your dog in your shack.
- ....Your parrot squawks, "CQ, CQ, DE Polly!"
- ....When you go anywhere you cannot go without your handheld, as you might miss something.



# Windtrax '98 Gearing up for August Balloon Launch

## AeroSpace Satellite Simulation Project

On Saturday August 15th, at 7:00 AM, the explorer scouts from Fort Wayne, Indiana, post 2816 will combine efforts with the students from Space Camp Indiana, to launch the 40th Windtrax balloon flight. The launch site will be in New Whiteland, Indiana at the home of Kim Miles (KB9JQO). ITT Aerospace builds the GOES Weather satellite here in Indiana and sponsors the Explorer post too!

On June 20th of this year the Space Camp students were forced to scrub their flight due to weather issues and flooding in the estimated landing area. This flight will allow both groups to complete a launch.

During the mission, students will operate each of the eight different workstations in the traveling mission control setup. Each workstation is designed to introduce the young students and their parents to the high tech communication techniques involved in AeroSpace Satellite operations.

Workstations at mission control include: HF Radio, FM flight communications through a crossband repeater, GPS tracking via APRS packet software, flight telemetry, Slow Scan Television (SSTV) between hams and students through the flight package, live Amateur TV from two on board CCD video cameras (yes, we can see the edge of space from 100,000 feet) and Internet link-up for real time data and pictures.

Additionally the Explorers have designed and constructed the crossband FM repeater which will fly as one of the three flight packages on this mission. Their preparation has been so extensive that drop testing of the package from three (3)

stories high and chamber testing of the temperature capabilities were included.

Windtrax, since it's inception in 1989, has encouraged student participation in all facets of this communication project. Student operation of the amateur radio equipment is stressed.

Windtrax is a volunteer organization made up of Indiana amateur radio operators. They build or assist in building the flight assembly. They setup mission control at school launch sites across Indiana. They provide technical guidance and assist the student operators on launch day. They also chase the balloon and recover the equipment in the flight package upon its descent. These services are performed at no cost to the participating schools.

Windtrax conducts about eight missions each year in Indiana and interest is growing. This has prompted Chuck Crist (WB9IHS), the flight director, to create a Windtrax "Team B". This allows other schools to participate from a location remote from the balloon launch site. Most of these "Team B" schools are then assigned a mission date for a future launch from their location.

This is the ultimate field day event. Students actually operate all aspects of mission control while learning about Satellites and Ham radio.

The Windtrax website at [www.windtrax.org](http://www.windtrax.org) has more information about this launch and lists the schedule for future missions. The website also offers LIVE video from mission control and from the airborne video cameras on launch day. Check-in frequencies are also listed.~WB9IHS

Ham 1: "I hear old Megawatt is retiring from ham radio."

Ham 2: "Oh, he's said that many time before."

Ham 1: "Yeah, but this time the FCC said it!"